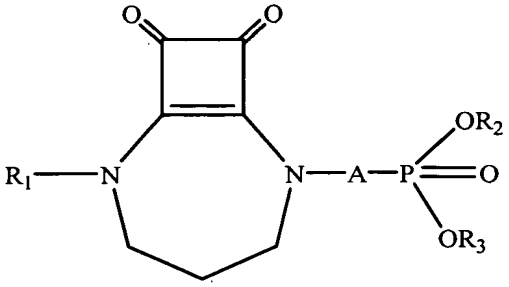
This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. ***(original)*** A compound of formula (I) or a pharmaceutically acceptable salt thereof:



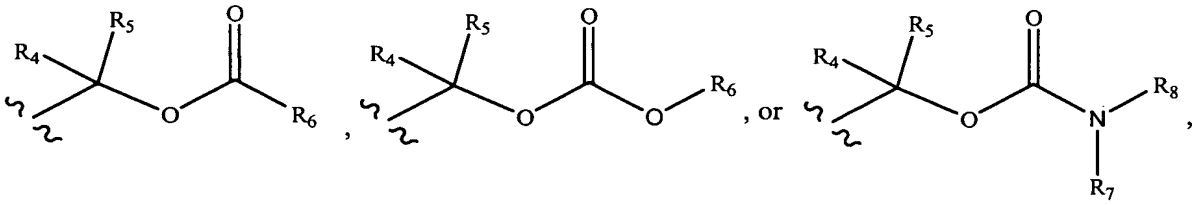
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a

C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.

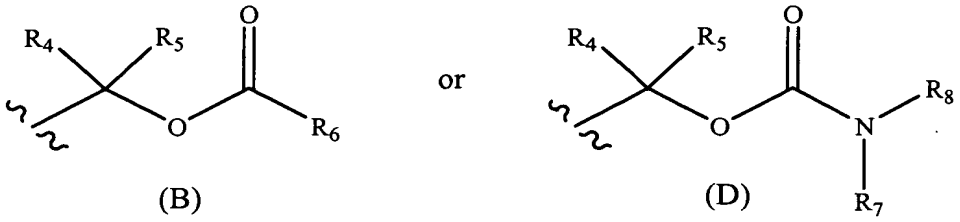
2. ***(original)*** The compound of claim 1 wherein R_1 is H or a C_1 to C_4 alkyl group.

3. ***(original)*** The compound of claim 2 wherein A is an alkylene group having the formula --$(CH_2)_n$-, where n is 1 to 3.

4. ***(original)*** The compound of claim 3 wherein n is 2.

5. ***(original)*** The compound of claim 4 wherein R_4 and R_5 are independently selected from H or a C_1 to C_4 alkyl group, and R_6 is selected from a C_3 to C_{10} linear or branched alkyl group, a C_5 to C_7 aryl group, a 5- to 7-membered heteroaryl group, or a cycloalkyl group having in the ring 5 to 7 carbon atoms.

6. ***(original)*** The compound of claim 5 wherein R_2 and R_3 are independently selected from H or the moiety:



(B) (D)

with the proviso that at least one of R_2 and R_3 is not H.

7. ***(original)*** The compound of claim 6 wherein R_2 and R_3 are independently selected from H or the moiety (B).

8. ***(original)*** The compound of claim 7 wherein R_6 is a C_5 to C_7 aryl group.

9. ***(currently amended)*** The compound of claim 1 wherein at least one compound of formula (I) is selected from:

a) 3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-7-phenyl-2,4,6-trioxa-3-phosphahept-1-yl benzoate;

b) 3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-8-propyl-2,4,6-trioxa-3-phosphaundec-1-yl-2-propylpentanoate;

c) ~~2,2-dimethyl-propionic acid (2,2-dimethyl-propionyloxymethoxy)-[2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]-non-1(7)-en-2-yl)-ethyl]-phosphinoyloxymethyl ester~~
2,2-dimethyl-propionic acid {(2,2-dimethyl-propionyloxymethoxy)-[2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]-non-1(7)-en-2-yl)-ethyl]-phosphinoyloxy} methyl ester;

d) 7-cyclohexyl-3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-1,5-dimethyl-3-oxido-7-oxo-2,4,6-trioxa-3-phosphahept-1-yl cyclohexanecarboxylate;

e) 7-cyclohexyl-3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-2,4,6-trioxa-3-phosphahep- t-1-yl cyclohexanecarboxylate;

f) [2-(8,9-Dioxo-2,6-diaza-bicyclo[5.2.0]non-1-(7)-en-2-yl)-ethyl]-phosphonic acid diisopropoxycarbonyl oxymethyl ester;

g) [2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl]-phosphonic acid bis[1-(benzoyloxy)ethyl] ester;

h) benzoic acid [2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]-hydroxy-phosphinoyloxymethyl ester; or

i) [2-(8,9-Dioxo-2,6-diaza-bicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]-phosphonic acid di-dimethylcarbamoyloxymethyl ester; or

a pharmaceutically acceptable salt thereof.

10. ***(original)*** The compound of claim 1 wherein the compound of formula (I) is selected from

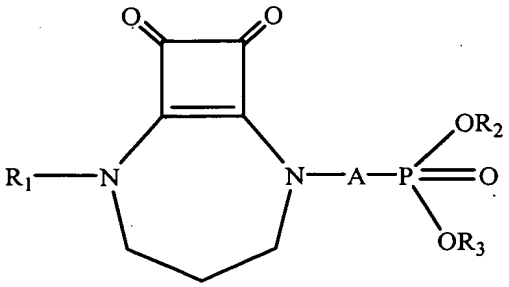
a) 3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1 (7)-en-2-yl]ethyl}-3-oxido-7-oxo-7-phenyl-2,4,6-trioxa-3-phosphahept-1-yl benzoate;

b) [2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1 (7)-en-2-yl]ethyl]-phosphonic acid bis[1-(benzoyloxy)ethyl]ester; or

c) benzoic acid [2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]non-1 (7)-en-2-yl)-ethyl]-hydroxy-phosphinoyloxymethyl ester; or

a pharmaceutically acceptable salt thereof.

11. ***(original)*** A method for treating at least one condition in a mammal selected from a cerebral vascular disorder selected from cerebral ischemia, cerebral infarction or cerebral vasospasm; cerebral trauma; muscular spasm; a convulsive disorder selected from epilepsy or status epilepticus; glaucoma; diabetic end organ complications; hypoglycemia; cardiac arrest; asphyxia anoxia; or spinal chord injury comprising administering to a mammal a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



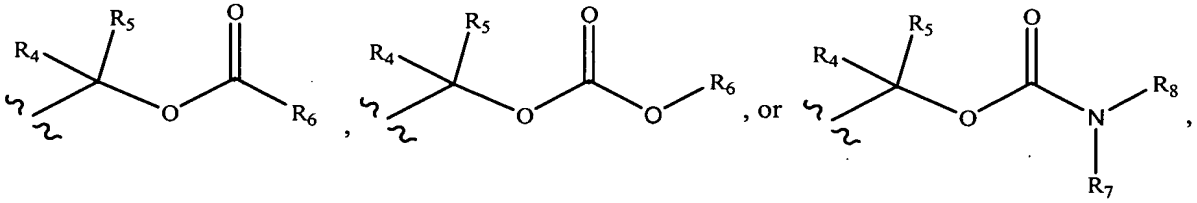
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

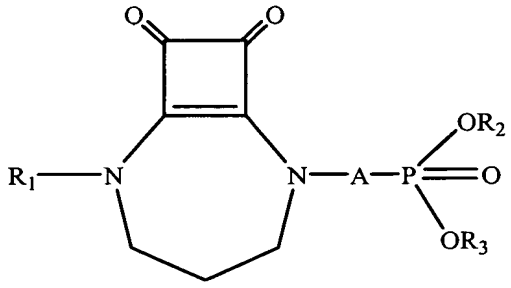
R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl

group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.

12. ***(original)*** The method of claim 11 wherein the mammal is human.

13. ***(original)*** A method for treating at least one condition in a mammal selected from anxiety disorders; mood disorders; schizophrenia; schizophreniform disorder; schizoaffective disorder; or cognitive impairment comprising administering to a mammal a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



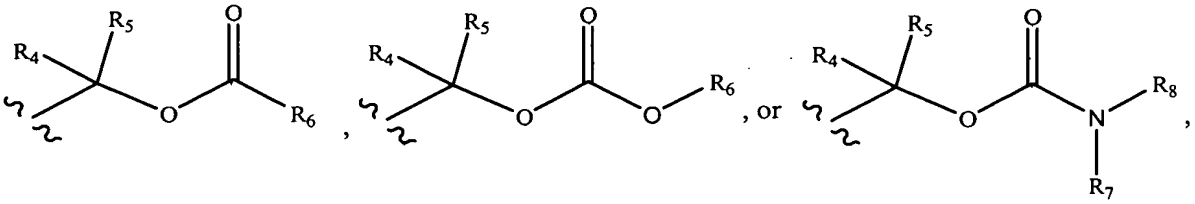
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

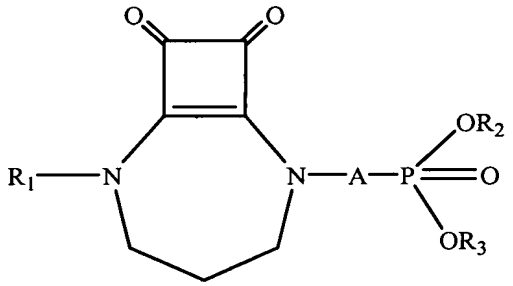
wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group

14. ***(original)*** The method of claim 13 wherein the anxiety disorder is selected from panic attack, agoraphobia, panic disorder, specific phobia, social phobia, obsessive

compulsive disorder, posttraumatic stress disorder, acute stress disorder, generalized anxiety disorder, separation anxiety disorder, or substance-induced anxiety disorder; or the mood disorder is selected from bipolar disorders, depressive disorders selected from major depressive disorder, dysthymic disorder, or substance-induced mood disorder, or mood episodes selected from major depressive episode, manic episode, mixed episode, or hypomanic episode.

15. ***(original)*** The method of claim 13 wherein the mammal is human.

16. ***(original)*** A method for treating at least one chronic neurodegenerative disorder in a mammal selected from Parkinson's disease, Huntingdon's disease, Alzheimer's disease, amyotrophic lateral sclerosis, or chronic dementia comprising administering to a mammal a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



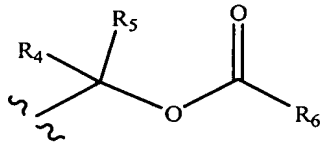
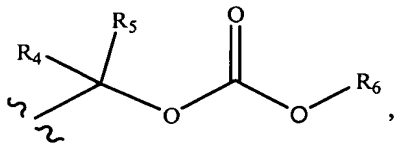
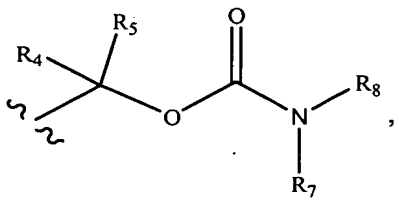
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or


, 
, or 
,

with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

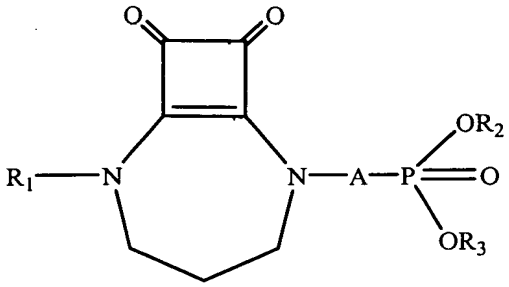
R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.

17. ***(original)*** The method of claim 16 wherein the mammal is a human.

18. ***(original)*** A method for treating at least one condition in a mammal selected from inflammatory diseases; fibromyalgia; complications from herpes zoster; prevention of tolerance to opiate analgesia; or withdrawal symptoms from addictive drugs comprising administering to a mammal a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



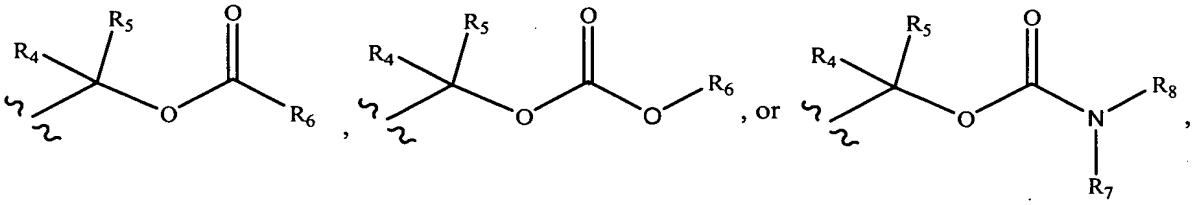
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

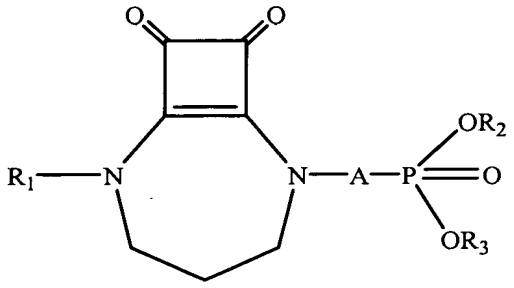
R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl

group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.

19. ***(original)*** A method for treating pain in a mammal comprising administering to a mammal a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



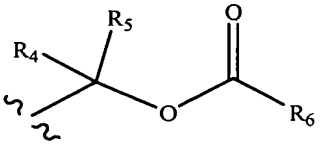
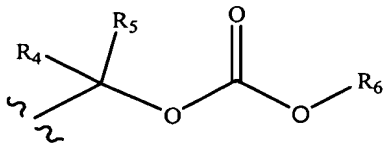
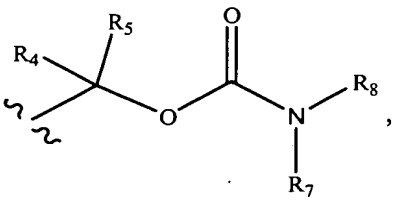
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or


, 
, or 
,

with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl

ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.

20. ***(original)*** The method of claim 19 wherein the pain is selected from at least one of neuropathic pain; cancer pain; visceral pain associated with pancreatitis or abdominal, pelvic or perineal regions; musculoskeletal pain associated with lower or upper back, spine, fibromylagia, temporomandibular joint, or myofascial pain syndrome; bony pain associated with bone or joint degenerating disorders; headaches; or pain associated with infections, sickle cell anemia, autoimmune disorders, multiple sclerosis, dental procedures, burns or inflammation.

21. ***(original)*** The method of claim 20 wherein the pain comprises neuropathic pain and is associated with at least one of diabetic neuropathy, peripheral neuropathy, post-herpetic neuralgia, trigeminal neuralgia, lumbar or cervical radiculopathies, fibromyalgia, glossopharyngeal neuralgia, reflex sympathetic dystrophy, casualgia, thalamic syndrome, nerve root avulsion, or nerve damage cause by injury selected from phantom limb pain, reflex sympathetic dystrophy or postthoracotomy pain, cancer, chemical injury, toxins, nutritional deficiencies, or viral or bacterial infections.

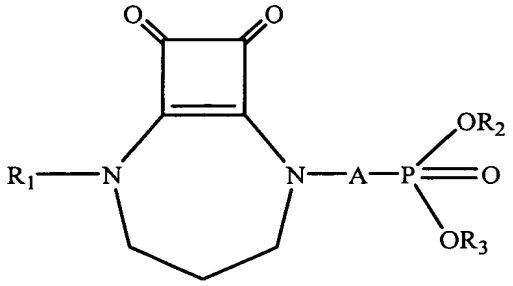
22. ***(original)*** The method of claim 19 wherein the mammal is human.

23. ***(original)*** The method of claim 19 further comprising administering a therapeutically effective amount of at least one pain relieving agent.

24. ***(original)*** The method of claim 23 wherein the pain relieving agent comprises an opioid analgesic.

25. ***(original)*** A pharmaceutical composition comprising:

a) a therapeutically effective amount of at least one compound of formula (I) or a pharmaceutically acceptable salt thereof:



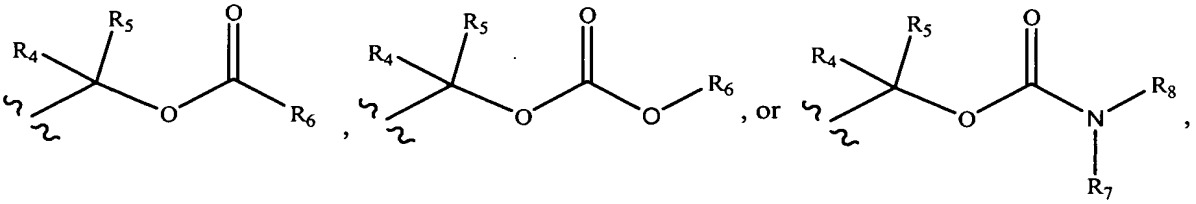
(I)

wherein:

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C_{14} aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_2 alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring;

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{21} alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur;

wherein any R_1 to R_8 group having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted on the aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety with 1 to about 5 substituents

independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group; and

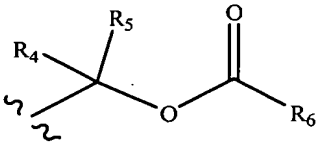
b) at least one pharmaceutically acceptable carrier.

26. ***(original)*** The composition of claim 25 wherein

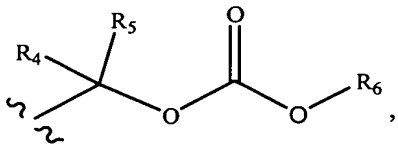
R_1 is H or a C_1 to C_4 alkyl group;

A is an alkylene group having the formula $-(CH_2)_n-$, where n is 1 to 3;

R_2 and R_3 are independently selected from H or:

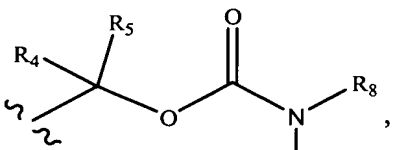


(B)



(C)

, or



(D)

with the proviso that at least one of R_2 and R_3 is not H;

R_4 and R_5 are independently selected from H or a C_1 to C_4 alkyl group; and

R_6 is selected from a C_3 to C_{10} linear or branched alkyl group, a C_5 to C_7 aryl group, a 5- to 7-membered heteroaryl group, or a cycloalkyl group having in the ring 5 to 7 carbon atoms.

27. ***(original)*** The composition of claim 26 wherein

R_2 and R_3 are independently selected from H or the moiety (B) and R_6 is a C_5 to C_7 aryl group.

28. ***(original)*** The composition of claim 25 wherein the compound of formula (I) is selected from:

a) 3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-7-phenyl-2,4,6-trioxa-3-phosphahept-1-yl benzoate;

b) 3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-8-propyl-2,4,6-trioxa-3-phosphaundec-1-yl-2-propylpentanoate;

c) ~~**2,2-dimethyl-propionic acid (2,2-dimethyl-propionyloxymethoxy)-[2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]-non-1(7)-en-2-yl)-ethyl]-phosphinoyloxymethyl ester**~~
2,2-dimethyl-propionic acid {(2,2-dimethyl-propionyloxymethoxy)-[2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]-non-1(7)-en-2-yl)-ethyl]-phosphinoyloxy} methyl ester;

d) 7-cyclohexyl-3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-1,5-dimethyl-3-oxido-7-oxo-2,4,6-trioxa-3-phosphahept-1-yl cyclohexanecarboxylate;

e) 7-cyclohexyl-3-{2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl}-3-oxido-7-oxo-2,4,6-trioxa-3-phosphahep- t-1-yl cyclohexanecarboxylate;

f) [2-(8,9-Dioxo-2,6-diaza-bicyclo[5.2.0]non-1-(7)-en-2-yl)-ethyl]-phosphonic acid diisopropoxycarbonyl oxymethyl ester;

g) [2-[8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl]ethyl]-phosphonic acid bis[1-(benzoyloxy)ethyl] ester;

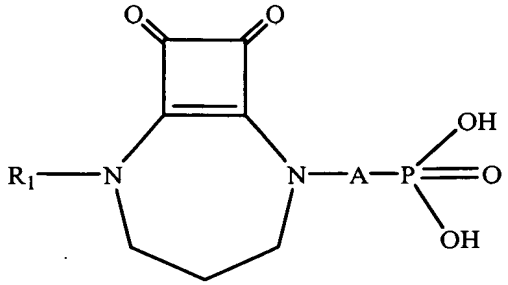
h) benzoic acid [2-(8,9-dioxo-2,6-diaza-bicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]-hydroxy-phosphinoyloxymethyl ester; or

i) [2-(8,9-Dioxo-2,6-diaza-bicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]-phosphonic acid di-dimethylcarbamoyloxymethyl ester; or

a pharmaceutically acceptable salt thereof.

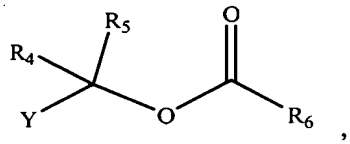
29. ***(original)*** A product made by the process comprising:

a) reacting a compound of formula (II)

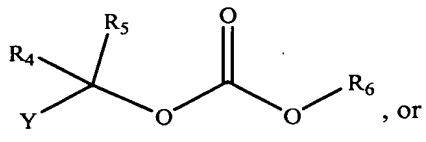


(II)

and at least one ester selected from

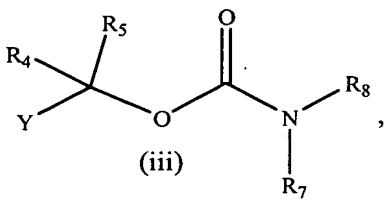


(i)



(ii)

, or



(iii)

,

wherein

R_1 is hydrogen, a C_1 to C_6 alkyl group, a C_2 to C_7 acyl group, a C_1 to C_6 alkanesulfonyl group, or a C_6 to C14 aroyl group;

A is alkylene of 1 to 4 carbon atoms or alkenylene of 2 to 4 carbon atoms;

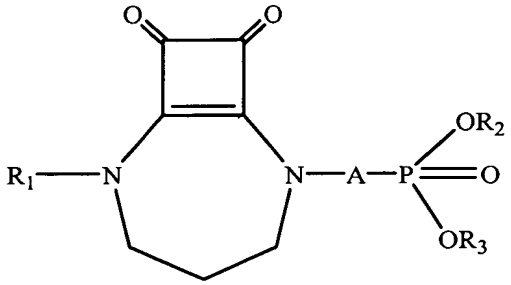
Y is a leaving group;

R_4 and R_5 are independently selected from hydrogen, a C_1 to C_4 alkyl group, a C_5 to C_7 aryl group, a C_6 to C_{15} alkylaryl group having 5 to 7 carbon atoms in the aryl ring, a C_2 to C_7 alkenyl group, or C_2 to C_7 alkynyl group, or R_4 and R_5 may together form a spiro C_3 to C_8 carbocyclic ring;

R_6 is a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C_{12}, alkylaryl group having 5 to 13 carbon atoms in the aryl moiety; a 5 to 13-membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, a C_4 to C_8 cycloalkyl group, a C_5 to C_{16} alkylcycloalkyl group having 4 to 8 carbon atoms in the cycloalkyl ring; and

R_7 and R_8 are independently selected from hydrogen, a C_1 to C_{12} linear or branched alkyl group, a C_2 to C_7 linear or branched alkenyl or alkynyl group, a C_5 to C_{13} aryl group, a C_6 to C12, alkylaryl group having 5 to 13 carbon atoms in the aryl moiety, a 5 to 13 membered heteroaryl group, a 6 to 21 membered alkylheteroaryl group having 5 to 13 members in the heteroaryl moiety, or R_7 and R_8 may together form a cycloalkyl or heterocycloalkyl group having in the ring 4 to 8 carbon atoms and optionally one to two atoms selected from nitrogen, oxygen or sulfur; and

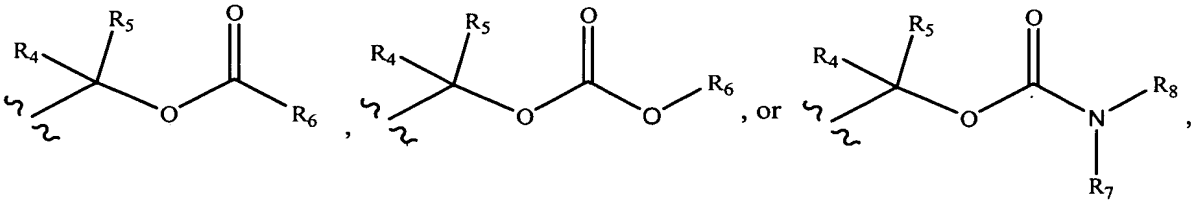
b) forming a product of formula (I) or a pharmaceutically acceptable salt thereof



(I)

wherein:

R_2 and R_3 are independently selected from hydrogen, or



with the proviso that at least one of R_2 and R_3 is not hydrogen;

R_1, A, R_4, R_5, and R_6 in formula (I) are defined as in formula (II); wherein any R_1 to R_8 group in formula (I) or (II) having an aryl, heteroaryl, cycloalkyl or heterocycloalkyl moiety may optionally be substituted with 1 to about 5 substituents independently selected from a halogen atom, a cyano, nitro or hydroxyl group, a C_1-C_6 alkyl group, or a C_1-C_6 alkoxy group.